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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,280	02/17/2004	Masaki Nakamura	56232.98	2036

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EXAMINER

FAISON GEE, VERONICA FAYE

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 07/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/781,280

Applicant(s)

NAKAMURA ET AL.

Examiner

Veronica Faison-Gee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,8,9 and 12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,8,9 and 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen et al (US Patent 5,990,202).

Nguyen et al teach ink-jet inks for ink-jet printing are provided which include a vehicle and a colorant, the colorant encapsulated by or associated with a primer core/shell polymer to form a primer/colorant combination, and the primer/colorant combination, upon printing on a print medium, encapsulated by a durable core/shell polymer. The primer core/shell polymer serves to provide adhesion of the durable core/shell polymer to the colorant and the durable core/shell polymer serves to provide a smear-fast film upon drying of the ink on a print medium (abstract and col. 2 line 59-col. 3 line 22). The reference further teaches that a second polymer (or polymer additive) can be deposited directly on the colorant (pigment, dye, magnetic powder, etc.) and generates a thin coating where the durable core/shell polymer can adhere to and thus it increases the physical attachment of the durable core/shell polymer to the colorant surface (col. 4 lines 54-59). The term "core/shell polymer" means a water-dispersive polymer comprised of a solid hydrophobic core surrounded by (either physically or chemically) a water-soluble shell component (col. 5 lines 64-67). The

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colorant is present in the composition include dye or pigment (col. 22 lines 31-34 and col. 25 lines 9-12). The inks of the present invention comprise about 5 to 50 wt %, preferably about 10 to 25 wt %, water-miscible organic co-solvent, about 0.05 to 10 wt %, preferably about 0.5 to wt %, colorant, about 0.005 to 50 wt %, preferably about 0.1 to 10 wt %, more preferably about 0.5 to 5 wt %, durable core/shell polymer, about 0.005 to 50 wt %, preferably about 0.1 to 10 wt %, more preferably about 0.5 to 5 wt %, primer core/shell polymer, and water. Other components and additives to the ink may also be present (col. 23 lines 53-61). The ratio of the colorant to binder (total core/shell polymer content) is in the range between 100:1 and 1:100, preferably between 50:1 and 1:50, and more preferably between 10:1 and 1:10 (col. 25 lines 36-39).

Nguyen et al and the claims differ in that Nguyen et al does not teach the exact same proportions as recited in the instant claims.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the compositional proportions taught by Nguyen et al overlap the instantly claimed proportions and therefore are considered to establish a prima facie case of obviousness. It would have been obvious to one of ordinary skill in the art to select any portion of the disclosed ranges including the instantly claimed ranges from the ranges disclosed in the prior art reference, particularly in view of the fact that;

“The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages”, In re Peterson 65 USPQ2d 1379 (CAFC 2003).

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Also, In re Geisler 43 USPQ2d 1365 (Fed. Cir. 1997); In re Woodruff, 16 USPQ2d 1934 (CCPA 1976); In re Malagari, 182 USPQ 549, 553 (CCPA 1974) and MPEP 2144.05.

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen et al (US Patent 5,990,202) as applied to claims 1-4 and 12 above, and further in view of Ninomiya et al (US 2003/0199613).

Nguyen et al is described above, but fails to teach an ink set.

Ninomiya et al teach an ink comprising colored particles containing a colorant and a resin dispersed in an aqueous medium (abstract). The dispersion of the colored particle is comprised of the colorant is a dye and the colored particles has a core/shell structure (page 3 para. 0045). The reference further teaches that the ink composition may be used in an ink set (see examples).

Therefore it would have been obvious to one of ordinary skill in the art to use the ink composition as taught by Nguyen et al in the ink set of Ninomiya et al because Ninomiya et al discloses a ink composition similar to the ink of Nguyen et al.

Response to Arguments

Applicant's arguments with respect to claims 1-4, 8, 9 and 12 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Veronica Faison-Gee whose telephone number is 571-272-1366. The examiner can normally be reached on Monday-Thursday and alternate Fridays 8 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

vfg
7-23-06



DAVID SAMPLE
PRIMARY EXAMINER